THERE IS CLAIMED:

1. A charger adapted to generate an output voltage and an output current for charging a battery, said charger including:

   - a first regulator,

   - a second regulator for regulating said output voltage to a predetermined value,

   - detector means for detecting said output current, and

   - activation means adapted to take at least two states:

   • a first state for activating said first regulator when said detector means detect a negative or positive output current, and

   • a second state for activating said second regulator when said detector means detect a substantially zero output current.

2. The charger claimed in claim 1 wherein said first regulator is a power or current regulator.

3. The charger claimed in claim 1 wherein said activation means include a switch and control means for controlling said switch and connected to the output of said detector means.

4. The charger claimed in claim 2 wherein said activation means include a switch and control means for controlling said switch and connected to the output of said detector means.

5. The charger claimed in claim 1 wherein said detector means include at least one comparator.

6. The charger claimed in claim 2 wherein said detector means include at least one comparator.

7. The charger claimed in claim 3 wherein said detector means include at least one comparator.

8. The charger claimed in claim 4 wherein said detector means include at least one comparator.

9. The charger claimed in claim 5 wherein said comparator is a first differential amplifier, said detector means include a detector resistor, and each terminal of said resistor is connected to a respective input of said first differential amplifier.

10. The charger claimed in claim 5 wherein said detector means include a second comparator.

11. The charger claimed in claim 9 wherein said detector means include a

second comparator.

12. The charger claimed in claim 10 wherein said second comparator is a second differential amplifier, a non-inverting input of said second differential amplifier is connected to an inverting input of said first differential amplifier, and an inverting input of said second differential amplifier is connected to a non-inverting input of said first differential amplifier.
13. The charger claimed in claim 3 wherein said control means comprise a microcontroller.
14. The charger claimed in claim 5 wherein said control means comprise a microcontroller.
15. The charger claimed in claim 9 wherein said control means comprise a microcontroller.
16. The charger claimed in claim 10 wherein said control means comprise a microcontroller.
17. The charger claimed in claim 12 wherein said control means comprise a microcontroller.
18. The charger claimed in claim 1 including charging means such that a negative current can flow through said charging means.
19. The charger claimed in claim 10 including charging means such that a negative current can flow through said charging means.
20. The charger claimed in claim 11 including charging means such that a negative current can flow through said charging means.
21. The charger claimed in claim 12 including charging means such that a negative current can flow through said charging means.
22. The charger claimed in claim 13 including charging means such that a negative current can flow through said charging means.
23. The charger claimed in claim 14 including charging means such that a negative current can flow through said charging means.
24. The charger claimed in claim 15 including charging means such that a negative current can flow through said charging means.
25. The charger claimed in claim 1 taking the form of a mobile radio terminal battery charger.
26. A method of charging a battery by means of a charger generating an output voltage and an output current, said method including a

regulation step and further including the following steps:

- detection of said output current,
- regulation by means of a first regulator where said output current is negative or positive,
- regulation of the output voltage to a predetermined value by means of a second regulator when said output current is substantially zero.

27. The battery charging method claimed in claim 26 wherein said predetermined value of said output voltage is less than the output voltage of said charger when said battery is charging.
28. A method of identifying a charger as claimed in claim 1, which method includes a step of measuring an off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
29. A method of identifying a charger as claimed in claim 2, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
30. A method of identifying a charger as claimed in claim 3, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
31. A method of identifying a charger as claimed in claim 5, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
32. A method of identifying a charger as claimed in claim 9, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
33. A method of identifying a charger as claimed in claim 10, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
34. A method of identifying a charger as claimed in claim 12, which method

includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.

35. A method of identifying a charger as claimed in claim 13, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
36. A method of identifying a charger as claimed in claim 18, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.
37. A method of identifying a charger as claimed in claim 25, which method includes a step of measuring the off-load output voltage of said charger and a step of comparing said off-load output voltage with said predetermined value fixed by said second regulator.